

C L A I M S

1. A polymer membrane for the separation of components of natural gas, that comprises an asymmetric  
5 hollow fibre of polyethersulphone for the purposes of pervaporation, treated with mixtures of liquids ( $C_2H_5OH + X$ ), in which  $X$  = toluene, acetone, dimethylformamide, with a content of  $X=7-12\%$  (by volume) in the mixture, subsequently treated with a solution at  $2.5\%$  (by volume)  
10 of urethanosiloxane in isopropyl alcohol.

2. A polymer membrane, according to claim 1, characterised in that a hollow fibre membrane of polyethersulphone is used, modified with a gaseous  
15 mixture [ $(F_2 - HF) : \text{inert gas}$ ] with content of  $(F_2 - HF)$  in the range  $0-90\%$  (by volume), and concentration of  $HF$  in fluorine of  $4-6\%$  (by volume).